

# INTERNATIONAL SEARCH REPORT

International Application No.  
PCT/JP03/00149

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 C21D9/56 C21D1/76

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 C21D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

PAJ; EPO-Internal, WPI Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A <i>Am</i>	PATENT ABSTRACTS OF JAPAN vol. 1996, no. 01, 31 January 1996 (1996-01-31) -& JP 07 233420 A (TOSHIBA CORP), 5 September 1995 (1995-09-05) abstract paragraphs '0015!-'0023! ---	1-5, 10, 12
A <i>AN</i>	PATENT ABSTRACTS OF JAPAN vol. 2002, no. 05, 3 May 2002 (2002-05-03) -& JP 2002-003953-A (SUMITOMO-METAL IND LTD), 9 January 2002 (2002-01-09) abstract paragraphs '0009!, '0010!, '0015!-'0019!, '0038!-'0044! --- -/--	1-5, 10, 12

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
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- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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- \*&\* document member of the same patent family

Date of the actual completion of the international search

13 November 2003

Date of mailing of the international search report

02/12/2003

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Lilimpakis, E

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A AG	EP 0 379 104 A (LINDE AG) 25 July 1990 (1990-07-25) column 2, line 18 - column 3, line 18 column 5, line 12 - line 46; figure 1 ---	1-5
A AA	US 4 966 632 A (VINCKX VALERY ET AL) 30 October 1990 (1990-10-30) column 5, line 6 - line 24 column 5, line 45 - line 56 ---	1-5
A AB	US 5 137 586 A (KLINK JAMES H) 11 August 1992 (1992-08-11) column 7, line 12 - line 33 column 7, line 59 - column 8, line 21; figures 5,7 ---	1-5
A AS	EP 0 979 879 A (AIR LIQUIDE) 16 February 2000 (2000-02-16) paragraphs '0001!', '0020!' - '0022!', '0026!' - '0028!'; figure 1 -----	1

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Information on patent family members

International Application No  
PCT/ 03/00149

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
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